

Attorney Docket No.: WON-0002  
Inventors: Kim et al.  
Serial No.: Not yet assigned  
Filing Date: Herewith  
Page 3

**Amendments to the Specification:**

Please replace the paragraph beginning at line 23 of page 6 with the following:

Therefore, the present inventors tried to find out a preservative motif participating in cell adhesion and detachment activity, and to prepare a peptide containing thereof. As a result, the present inventors have prepared peptides NKDIL (SEQ ID NO:11), EPDIM (SEQ ID NO:12) and their derivatives mediating cell adhesion and detachment by working with  $\alpha 3\beta 1$  integrin using the second and the forth domains of  $\beta$ ig-h3 which is known as a cell adhesion molecule and have disclosed that two very preservative amino acids, aspartic acid (Asp) and isoleucine (Ile) which are located near H2 region in the second and the forth domains of  $\beta$ ig-h3, are required amino acids for cell adhesion and detachment activity, leading to the application for a patent (Korea Patent Application #2000-25665).

Please replace the paragraph beginning at line 17 of page 15 with the following:

The present inventors prepared proteins each represented by SEQ. ID. No 7, No 8, No 9 and No 10 having one of the 4<sup>th</sup> fas-1 domains encoded by SEQ ID NO:6 containing 502<sup>nd</sup> - 632<sup>nd</sup> amino acids of  $\beta$ ig-h3, two, three and four of those respectively and named them " $\beta$ ig-h3 D-IV(1x)" (SEQ. ID. No. 7), " $\beta$ ig-h3 D-IV(2x)" (SEQ. ID. No. 8), " $\beta$ ig-h3 D-IV(3x)" (SEQ. ID. No. 9) and " $\beta$ ig-h3 D-IV(4x)" (SEQ. ID. No. 10) (see FIG. 4).

Attorney Docket No.: WON-0002  
Inventors: Kim et al.  
Serial No.: Not yet assigned  
Filing Date: Herewith  
Page 4

Please replace the paragraph beginning at line 7 of page 20 with the following:

In the case of using coloring enzymes in step 4, ~~coloring~~ colorimetric substrates should be used to measure the activity of the enzyme and every material that are able to develop color of the enzyme bound to the secondary antibody can be used as a ~~coloring~~ colorimetric substrate. 4-chloro-1-naphtol (4CN), Diaminobenzidine (DAB), Aminoethyl carbazole (AEC), 2,2'-Azino-bis(3-ethylbenzothiazoline-6-sulfonic acid) (ABTS), o-Phenylenediamine (OPD) and Tetramethyl Benzidine (TMB) are preferably used as coloring substrates.

Please replace the paragraph beginning at line 10 of page 30 with the following:

Pellets of *E.coli* cells were resuspended in cell lysis buffer (50 mM Tris-HCl, pH 8.0, 100 mM NaCl, 1 mM EDTA, 1% ~~Triton~~ TRITON X-100 (octylphenol ethoxylate detergent, dispersant and emulsifier for oil-in-water systems), 1 mM phenylmethane sulfonyl fluoride (referred as "PMSF" hereinafter) and 0.5 mM DTT), and then crushed by ultrasonification. The procedure was repeated 5 times.

Please replace the paragraph beginning at line 3 of page 32 with the following:

*E.coli* BS21(DE3) cells were transformed with the expression vectors. The transformants were cultured in LB medium containing kanamidine (50 µg/µl). Pellets of *E.coli* cells were resuspended in cell lysis buffer (50 mM Tris-HCl, pH 8.0, 100 mM NaCl, 1 mM EDTA, 1% ~~Triton~~ TRITON X-100 (octylphenol ethoxylate detergent, dispersant and

Attorney Docket No.: WON-0002  
Inventors: Kim et al.  
Serial No.: Not yet assigned  
Filing Date: Herewith  
Page 5

emulsifier for oil-in-water systems), 1 mM phenylmethane sulfonyl fluoride (referred as "PMSF" hereinafter) and 0.5 mM DTT), and then crushed by ultrasonification. The procedure was repeated 5 times. The above solution was centrifuged to obtain supernatants. The proteins were purified by using Ni-NTA resin (Qiagen) from the supernatants, and confirmed with SDS-PAGE.

Please replace the paragraph beginning at line 20 of page 32 with the following:

In order to determine the quantitative ratio of the primary antibody to human  $\beta$ ig-h3 protein, the human  $\beta$ ig-h3 was diluted (0.5  $\mu$ g/ $\mu$ l) with 20 mM carbonate-bicarbonate solution (pH 9.6, 0.02% sodium azide contained). The  $\beta$ ig-h3 solution was added in each well of 96-well plate (200  $\mu$ l/well) and coated thereof at 4°C for overnight. The primary anti-human  $\beta$ ig-h3 antibody was serially diluted with diluting solution (saline-phosphate buffer solution/~~Tween~~ TWEEN 80 (polyoxyethylene (20) sorbitan mono-oleate) at 1:200, 1:400, 1:800, 1:1600, 1:2000 and 1:3200, and added into the coated 96-well plate. The secondary antibody (1:5000) was also added thereto and reacted thereof at room temperature for 1 and half hours. Substrate solution (prepared by dissolving o-phenylendiamine in methanol (10 mg/ml), diluting with distilled water at 1:100, and mixing with 10  $\mu$ l of 30% hydrogen peroxide solution) was also added thereto and reacted thereof at room temperature for 1 hour. The reaction was terminated by adding 50  $\mu$ l of 8 N sulfuric acid solution, and ELISA was performed (O.D 492 nm).